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Hawkesbury, ON
K6A 1K7
Canada

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D206-642-451
Job Sheet 183272



Part No: D206-642-451

Job Qty: 1 ea

Part Name: Replacement Skidtube, High Gear with Run-on Landing Wearplates Fits LH or RH



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 9/14/18

Job Tracking No:

Due Date: 9/28/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG D4361-043 REV A SHEETS 1,3,4, IIN-D206-642 REV Q SHEETS 31-32 IPP REV:A NEW ISSUE 13-06-13 JLM VERIFIED BY:DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea	9/28/18	9/28/18	0.00	0.00	Start Up Skidtubes-1		MKG
110	Skidtubes	1 pcs	9/28/18	9/28/18	0.00	3.70	Skidtubes-2		DD BE MKG
115	QC	1 pcs	9/28/18	9/28/18	0.00	0.00	QC5		38 DAS
116	QC	1 pcs	9/28/18	9/28/18	0.00	0.00	QC10		9-89 38
120	HandFinish	1 pcs	9/28/18	9/28/18	0.00	0.74	HandFinish1		D.R 18/10/12
130	QC	1 pcs	9/28/18	9/28/18	0.00	0.00	QC7-1		MKG
140	Skidtubes	1 pcs	9/28/18	9/28/18	0.00	3.70	Skidtubes-2		MKG
150	QC	1 pcs	9/28/18	9/28/18	0.00	0.00	QC5		BE
160	Skidtubes	1 pcs	9/28/18	9/28/18	0.00	3.70	Skidtubes-2		BE DAS 160
180	QC	1 pcs	9/28/18	9/28/18	0.00	0.00	QC10		38 DAS
190	QC	1 pcs	9/28/18	9/28/18	0.00	0.00	QC5		9-89 38
200	HandFinish	1 pcs	9/28/18	9/28/18	0.00	0.74	HandFinish2		D.R 18/10/10
210	Powdercoat	1 pcs	9/28/18	9/28/18	0.00	0.22	Powdercoat1		DR B-18-10
220	QC	1 pcs	9/28/18	9/28/18	0.00	0.00	QC3		BE
230	HandFinish	1 pcs	9/28/18	9/28/18	0.00	0.74	HandFinish4		BE 18-10-10
240	QC	1 pcs	9/28/18	9/28/18	0.00	0.00	QC5		OCT 1 1 2018 68
245	DC	1 pcs	9/28/18	9/28/18	0.00	0.00	DC		9-89
250	Packaging	1 pcs	9/28/18	9/28/18	0.00	0.00	Packaging3-1		Emel
260	QC21-FG	1 Ea	9/28/18	9/28/18	0.00	0.00	QC21		Emel 18.10.12

Part Op 110 - 1-Deburr Fwd edge of tube 3-Weld Fwd Cap as per Dwg D4361. Use aluminum rod. Grind D2647 to fit as required. 4-Grind Welds Ridge and to 13 lower

Descriptions: 7-Cut aft end to length from front of tube 6-Drill pilot holes using drill jig DT8025 & DT8169 A-B-C-D 8-Open Aft cap hole using #6 drill bit 9-Open holes for Tow Ring to Ø0.625" as per Dwg D4361, D4361-043 Drilling Detail 10-Remove inside

140 - 1-Open holes to finished size as per Dwg D4361, D4361-043 Drilling Detail (without cutting fluid) 2-Countersink crossbolt spacer holes as per Dwg D4361 (without cutting fluid) 4-Bond D2654-7 web in place as per QSI 015. Ensure holes line up. Allow 12 Hrs. cure time before cutting 8-138943 18-03-10

160 - 1-Prep per QSI 005 and Insert cross bolt spacers D2649. Weld as per QSI 004 and Dwg D4361. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

200 - Brush alodine tube on crossbolt spacer area, do not acid etch, do not dip tube in tank.

210 - Make sure Nut Plate Thread is protected using paint screw, and mask GHW studs.

230 - 1-Install wearplates as per dwg D4361. 7-Wing Walk as per Dwg D4361-043 and QSI 005 4.4

245 - Photocopy bluefile and create labels per PPP D206-642-451 CHG001 ✓

250 - Identify and pack for shipping as per PPP D206-642-451

M 509813. JURY: 2:45 OUT: 3:00 FIVE 3:15

wing walk. 5098120

sika Alex M138943 Exp 12/03

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____ Date : _____ Descrip _____	DISPOSITION Rework ☐	Skid-tube ☐	Cross tube ☐	 DART AEROSPACE Container No: S114072 Part: D206-642-451 Job No: 183272 Serial No/Batch: S114072 Revision: _____ Inspector: _____ Exp Date: _____ Instructions: TC STC SH98-4 Issue 2, EASA STC SA00475SE 15/10/28, EASA STC	Water Jet ☐ Prod. Eng. Coord. ☐ /Store/Packaging Supplier ☐ Engineering Quality ☐ Other ☐ MRB (QSI042) Approval ☐ Completed By _____ Lead hand / Supervisor Approval Verification ☐ QC / QA Coordinator Approval ☐
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Root Cause			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re- ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Force ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐

Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
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OTHER : _____

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D2620	Skidtube, 206 Skidtube	1 Ea (1 ea)	90-Start up Operation	5108902
D2647	Cap	1 Ea (1 ea)	90-Start up Operation	5038805
D2654-7	Web	1 Ea (1 ea)	140-Skidtubes	5006447
D2649	Cross Bolt Spacer	26 Ea (26 ea)	160-Skidtubes	5050570
AN3-36A	Bolt	10 Ea (10 ea)	230-HandFinish	5062616
CCR264SS3-3	Cherry Rivet	2 Ea (2 ea)	230-HandFinish	FM137622
CR3212-4-03	Cherry Rivet	2 Ea (2 ea)	230-HandFinish	FM137886-0
D2646	Aft Cap	1 Ea (1 ea)	230-HandFinish	M163254-102
D2651-1	Plug	8 Ea (8 ea)	230-HandFinish	F165327
D2651-3	O-Ring	8 Ea (8 ea)	230-HandFinish	5044502
D2680-041	Nut Plate	1 Ea (1 ea)	230-HandFinish	F158428
D3873-1	Bushing	20 Ea (20 ea)	230-HandFinish	5056590
D4366-041	Run-on Landing Wearplate Fwd	1 Ea (1 ea)	230-HandFinish	F159445
D4366-043	Run-on Landing Wearplate Aft	1 Ea (1 ea)	230-HandFinish	F159452
MS21042-3	Nut	10 Ea (10 ea)	230-HandFinish	5108577
MS27039-1-08	Screw	2 Ea (2 ea)	230-HandFinish	5043210
MS27039-4-06	Screw	1 Ea (1 ea)	230-HandFinish	FM137951-1
NAS1149C0332R	Washer	10 Ea (10 ea)	230-HandFinish	5071663
NAS1149D0332J	Washer	2 Ea (2 ea)	230-HandFinish	5100407-1
NAS1149D0463J	Washer	1 Ea (1 ea)	230-HandFinish	5092780

M.U. 005855

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D2620	1	21	0
	D2647	1	33	0
140-Skidtubes	D2654-7	1	7	0
160-Skidtubes	D2649	26	206	0
230-HandFinish	AN3-36A	10	69	0
	CCR264SS3-3	2	316	0
	CR3212-4-03	2	192	0
	D2646	1	68	0
	D2651-1	8	248	0
	D2651-3	8	625	0
	D2680-041	1	40	0
	D3873-1	20	38	0
	D4366-041	1	2	0
	D4366-043	1	2	0
	MS21042-3	10	584	0
	MS27039-1-08	2	505	0
	MS27039-4-06	1	74	0
	NAS1149C0332R	10	5,591	0
	NAS1149D0332J	2	2,488	0
	NAS1149D0463J	1	7,424	0

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

QTY -041	QTY -043	PART NUMBER	DESCRIPTION
X		D4361-041	SKIDTUBE ASSY
	X	D4361-043	SKIDTUBE ASSY
1	1	D2600-1-160	EXTRUSION
1		D2654-5	WEB
	1	D2654-7	WEB
1	1	D2646	AFT CAP
1	1	D2647	CAP
23	26	D2649	CROSS BOLT SPACER
4	8	D2651-1	PLUG
4	8	D2651-3	O-RING
1	1	D2680-041	NUT PLATE
18	20	D3873-1	BUSHING
1		D4364-041	FWD WEARPLATE ASSY
1		D4364-043	AFT WEARPLATE ASSY
	1	D4366-041	FWD WEARPLATE ASSY
	1	D4366-043	AFT WEARPLATE ASSY
9	10	AN3-36A	BOLT
9	10	NAS1149C0332R	WASHER (OR AN960C10L)
9	10	MS21042-3	NUT
2	2	NAS1149D0332J	WASHER (OR AN960JD10L)
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	MS27039-1-08	SCREW
1	1	MS27039-4-06	SCREW
1	1	NAS1149D0463J	WASHER (OR AN960JD416)

NOTES:

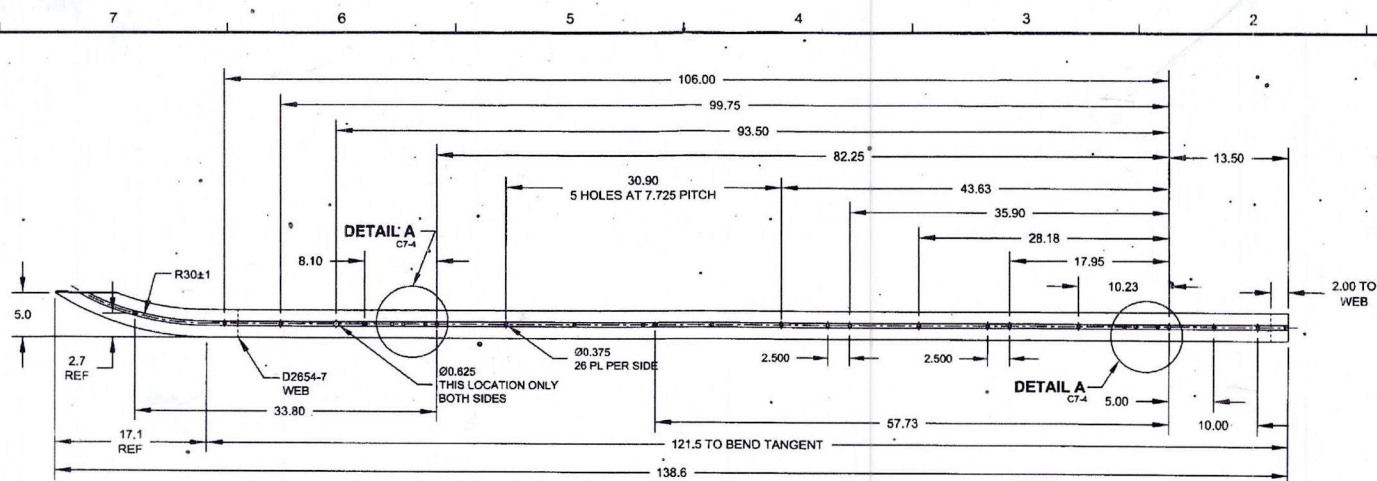
- MATERIAL: N/A
- FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSTALLING D2654-5/-7 WEB
-POWDER COAT WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
-BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- UNITS: INCHES UNLESS OTHERWISE NOTED
- BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- IDENTIFICATION: NONE
- WEIGHT: D4361-041 = 37.5 LBS
D4361-043 = 44.3 LBS
- WELD PER DART QSI 004
- DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE.
A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)

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UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

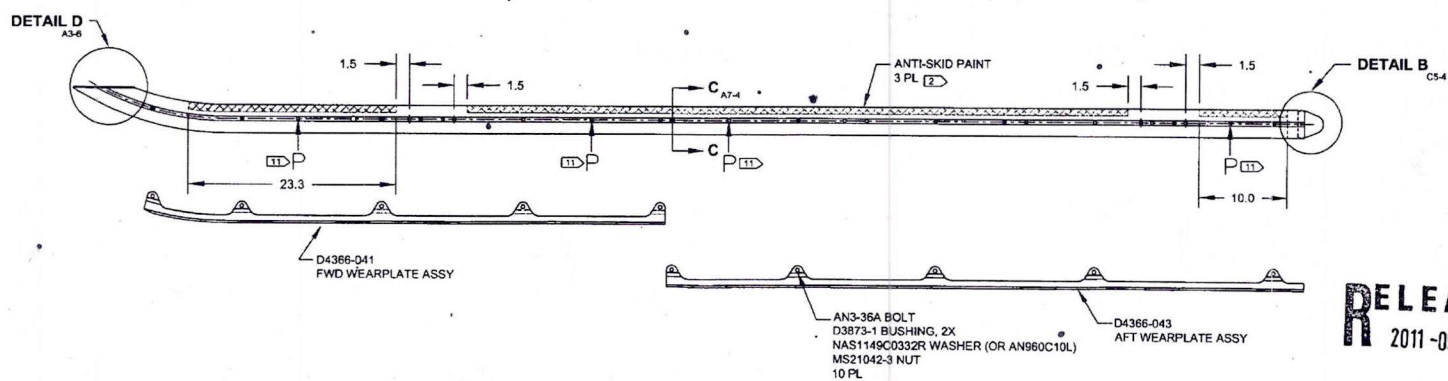
NO. 183272 MWS
18-09-26

RELEASED
R 2011-09-12

A	NEW ISSUE		SC	11.05.05
REV.	DESCRIPTION		BY	DATE
DESIGN	SC	DART AEROSPACE USA, INC		
DRAWN	SC	PORT HADLOCK, WA		
CHECKED	9	DRAWING NO.	REV. A	
MFG. APPR.	E	D4361	SHEET 1 OF 4	
APPROVED	10	TITLE	SCALE	
DE APPR.	H	206L/407 SKIDTUBE ASSEMBLIES	NT	
DATE	11.05.05	COPYRIGHT © 2011 BY DART AEROSPACE USA, INC		
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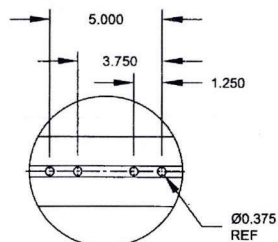
D4361-043 BENDING/DRILL DETAIL



D4361-043 ASSEMBLY/FINISHING DETAIL

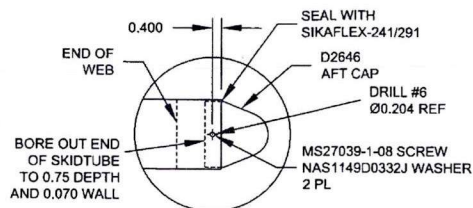
RELEASED
2011-09-12
NW

DESIGN	SC	DART AEROSPACE USA, INC PORT HADLOCK, WA	
DRAWN	SC		
CHECKED	97	DRAWING NO.	REV. A
MFG. APPR.	8	D4361	SHEET 3 OF 4
APPROVED	140	TITLE	SCALE
DE APPR.		206L/407 SKIDTUBE ASSEMBLIES	NTS
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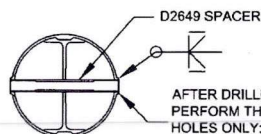
DETAIL A

C3-2
D7-2
C3-3
D6-3



DETAIL B

B2-2
B1-3

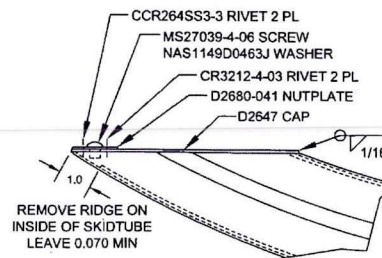


AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.030 X 45°
2. INSERT D2649 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. CBORE TO Ø0.313 X 0.75 DP

SECTION C-C
FOR Ø0.375 HOLES ONLY

B4-2
B5-3

ORIENTATION OF
D2680-041



DETAIL D

B7-2
B7-3

DETAIL D NOTES:

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D2647 (TRIM AS NECESSARY)
4. WELD D2647 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D2680-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D2680-041 PRIOR TO FINISH

RELEASED
2011-09-12

DESIGN	SC	DART AEROSPACE USA, INC	
DRAWN	SC	PORT HADLOCK, WA	
CHECKED	JP	DRAWING NO.	REV. A
MFG. APPR.	JP	D4361	SHEET 4 OF 4
APPROVED	JP	TITLE	SCALE
DE APPR.	JP	206L/407 SKIDTUBE ASSEMBLIES	NTS
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Change Record

PAGE 1 OF 1

Part Number: D206-642-451

Description: REPLACEMENT SKIDTUBE, LH/RH

[illegible]